

# XC8110AA010R Evaluation Board User Manual

**6Vmax, 500mA Load switch IC with ideal diode function**

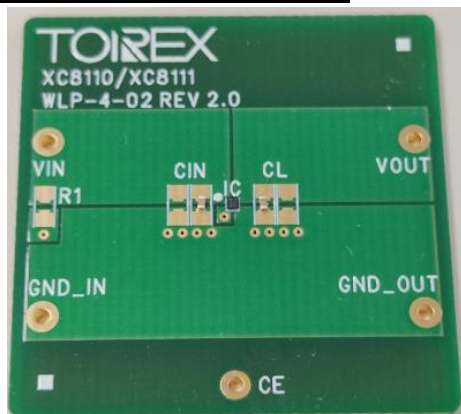
## **CAUTION**

### **ENGINEERING EVALUATION PURPOSES ONLY**

This evaluation board is made for the purpose of the product evaluation.  
It is strictly prohibited to use this evaluation board for any other purpose.

Torex Semiconductor does not guarantee that all samples will perform in exactly the same way and we recommend that you always consult our product data sheets for the minimum and maximum specifications.

It is also important that you evaluate all our products carefully before mass

**XC8110AA010R Evaluation Board***6Vmax, 500mA Load switch IC with ideal diode function***Evaluation Board Picture****Evaluation Board SPEC**

| PARAMETER                                      |                                               | SYMBOL    | MIN. | TYP. | MAX. | UNITS |
|------------------------------------------------|-----------------------------------------------|-----------|------|------|------|-------|
| Input Voltage                                  | Applied voltage to $V_{OUT}$ :<br>0V ~ 1.5V   | $V_{IN}$  | 1.5  | -    | 6.0  | V     |
|                                                | Applied voltage to $V_{OUT}$ :<br>1.5V ~ 6.0V |           | 0.0  | -    | 6.0  |       |
| Output Voltage                                 | Applied voltage to $V_{IN}$ :<br>0V ~ 1.5V    | $V_{OUT}$ | 1.5  | -    | 6.0  | V     |
|                                                | Applied voltage to $V_{IN}$ :<br>1.5V ~ 6.0V  |           | 0.0  | -    | 6.0  |       |
| Output Current<br>( $T_a=25^{\circ}\text{C}$ ) | $1.5\text{V} \leq V_{IN} \leq 1.7\text{V}$    | $I_{OUT}$ | -    | -    | 300  | mA    |
|                                                | $1.7\text{V} < V_{IN} \leq 6.0\text{V}$       |           | -    | -    | 500  | mA    |

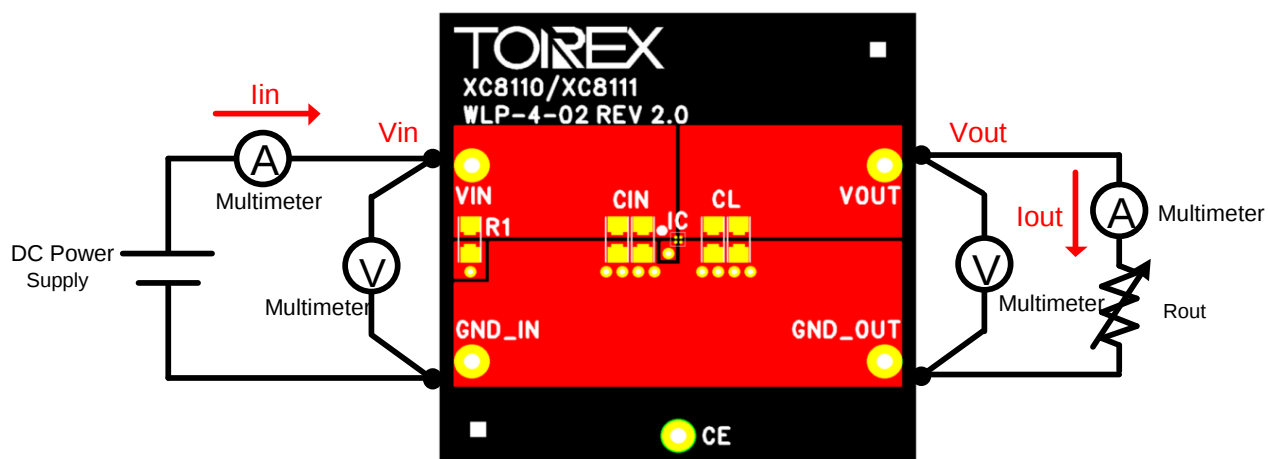
**XC8110/XC8110 Series Features**

- Input Voltage Range ..... 1.5V ~ 6.0V
- Max Output Current ..... 500mA
- Ideal Diode function
  - Forward Voltage ..... 20mV
  - Quiescent Current ..... 3.6 $\mu\text{A}$
  - Stand-by Current ..... 0.65 $\mu\text{A}$
- ORing connection available
- Built-in protection function (Over Current, Thermal Shutdown)

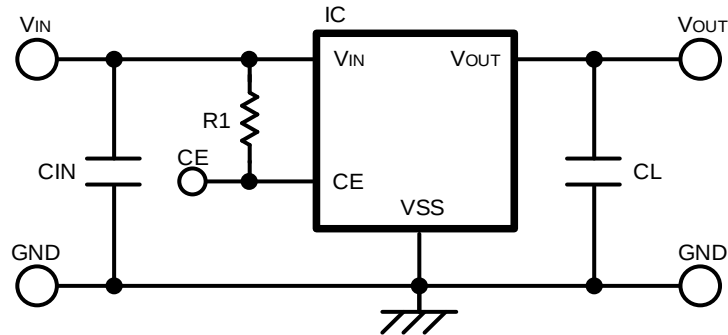
## **XC8110AA010R Evaluation Board**

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### **Quick Start Procedure**



Active : CE="H" (1.2V~6.0V)  
Stand-by : CE="L" (0V~0.3V)

**XC8110AA010R Evaluation Board***6Vmax, 500mA Load switch IC with ideal diode function***Schematic****BOM****Required Circuit Component**

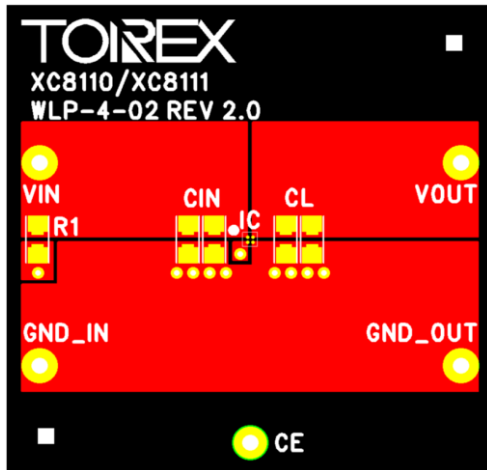
| Item | Value | Description                     | Size [mm] | Part Number     | Manufacture |
|------|-------|---------------------------------|-----------|-----------------|-------------|
| IC   | -     | Load switch IC with ideal diode | WLP-4-02  | XC8110AA010R-G  | TOREX       |
| CIN  | 0.1uF | Ceramic cap., 50V               | 1005      | CGA2B3X7R1H104K | TDK         |
| CL   | 0.1uF | Ceramic cap., 50V               | 1005      | CGA2B3X7R1H104K | TDK         |
| R1   | -     | -                               | -         | -               | -           |

## **XC8110AA010R Evaluation Board**

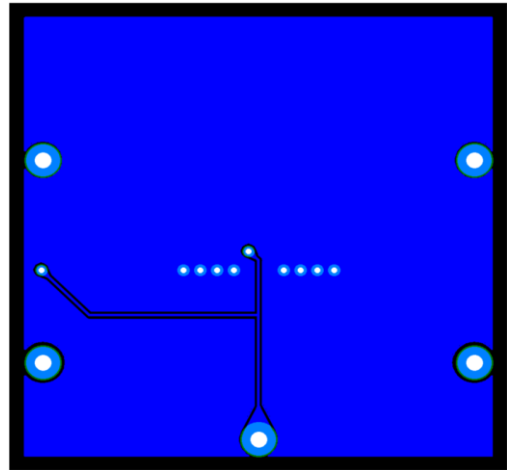
*6Vmax, 500mA Load switch IC with ideal diode function*

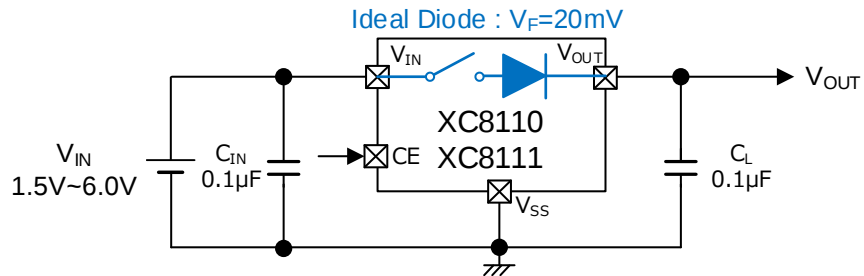
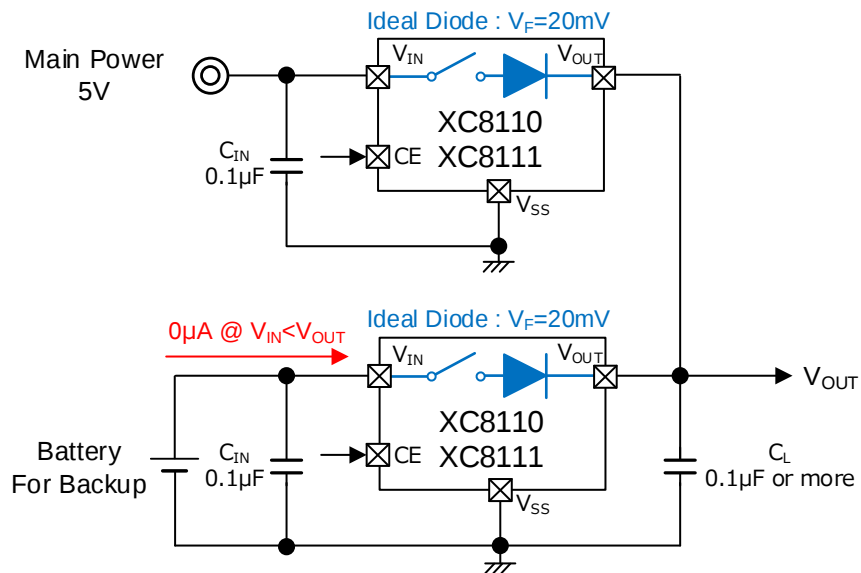
### **PCB Layout**

Layer 1



Layer 2



**XC8110AA010R Evaluation Board***6Vmax, 500mA Load switch IC with ideal diode function***【Appendix】 Typical Application Circuit****Diode / substitute for load switch****OR circuit: backup circuit, etc.**

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